

FORM PTO-1449  INFORMATION DISCLOSURE CITATION IN AN APPLICATION  AUG 29 2001 PATENT & TRADEMARK OFFICE	DOCKET NUMBER	APPLICATION NUMBER
	NPW 312	09/802,361
	APPLICANTS DAVID J. EDLUND, WILLIAM A. PLEDGER and TODD STUDEBAKER	
FILING DATE	GROUP ART UNIT	
March 8, 2001	1764	

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FIL. DATE IF APPROP.
<i>[initials]</i>	2,824,620	2/25/1958	De Rosset	95	56	
<i>[initials]</i>	3,144,312	8/11/1964	Mertens	48	95	
<i>[initials]</i>	3,208,198	9/28/1965	Rubin	95	56	
<i>[initials]</i>	3,336,730	8/22/1967	McBride et al.	95	56	
<i>[initials]</i>	3,338,681	8/29/1967	Kordesch	422	211	
<i>[initials]</i>	3,350,176	10/31/1967	Green et al.	422	109	
<i>[initials]</i>	3,368,329	2/13/1968	Eguchi et al.	968	888	
<i>[initials]</i>	3,450,500	6/17/1969	Setzer et al.	423	653	
<i>[initials]</i>	3,469,944	9/30/1969	Bocard et al.	423	650	
<i>[initials]</i>	3,520,803	7/21/1970	Iaconelli	210	640	
<i>[initials]</i>	3,524,819	8/18/1970	Guerrieri	48	198.6	
<i>[initials]</i>	3,564,819	2/23/1971	Neulander et al.	96	7	


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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO	
<i>[initials]</i>	JP 45-14404	5/1970	Japan				X
<i>[initials]</i>	JP 45-2642	9/1970	Japan				X













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<i>[initials]</i>	English language abstract of Japanese Patent No. 432150, 1992.
<i>[initials]</i>	English language abstract of Japanese Patent No. 513230, 1993.



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
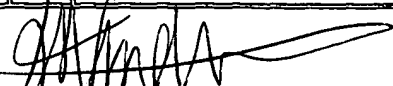
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FIL. DATE IF APPROP.
	3,665,680	5/30/1972	Heuser	96	10	
	3,881,897	5/6/1975	Faure et al.	96	9	
	3,920,416	11/18/1975	Houseman	48	95	
	3,955,941	5/11/1976	Houseman et al.	48	95	
	3,972,695	8/3/1976	Buckley et al.	96	10	
	3,982,910	9/28/1976	Houseman et al.	48	61	
	4,003,725	1/18/1977	Bunn, Jr. et al.	96	8	
	4,056,373	11/1/1977	Rubin	96	10	
	4,098,959	7/4/1978	Fanciullo	429	25	
	4,098,960	7/4/1978	Gagnon	429	25	
	4,254,086	3/3/1981	Sanders	422	187	
	4,381,641	5/3/1983	Madgavkar et al.	60	777	

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











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	JP 1-145302	6/1989	Japan				X
	JP 1-145303	6/1989	Japan				X

## OTHER DOCUMENTS



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EXAMINER 	DATE CONSIDERED 1/18/2006

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

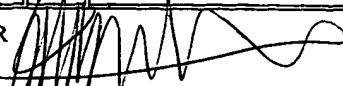
## U.S. PATENT DOCUMENTS

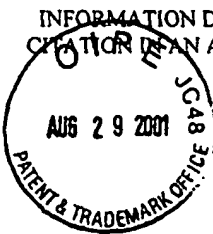
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	4,430,304	2/7/1984	Spurrier et al.	422	204	
	4,444,158	4/24/1984	Yoon	123	1A	
	4,468,235	8/28/1984	Hill	95	46	
	4,504,447	3/12/1985	Spurrier et al.	422	204	
	4,654,063	3/31/1987	Auvil et al.	62	624	
	4,684,581	8/4/1987	Struthers	422	19	
	4,713,234	12/15/1987	Weirich et al.	423	648.1	
	4,810,485	3/7/1989	Marianowski et al.	456	577	
	4,849,187	7/18/1989	Uozu et al.	347	4	
	4,981,676	1/1/1991	Minet et al.	423	652	
	5,158,581	10/27/1992	Coplan	95	52	
	5,198,002	3/30/1993	Mei et al.	95	275	

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











	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO	
	EP 0434562 A1	6/26/1991	EPO			X	
	JP 6-134244	5/1994	Japan				X

## OTHER DOCUMENTS



	English language abstract of Japanese Patent No. 604070, 1994.
	English language abstract of Japanese Patent No. 710910, 1995.
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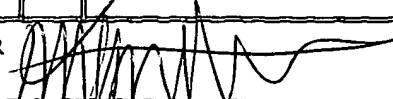
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	5,205,841	4/27/1993	Vaiman	95	46	
	5,215,729	6/1/1993	Buxbaum	423	248	
	5,225,080	7/6/1993	Karbachsch et al.	210	321.75	
	5,226,928	7/13/1993	Makabe et al.	48	94	
	5,229,102	7/20/1993	Minet et al.	423	652	
	5,326,550	7/5/1994	Adris et al.	423	652	
	5,354,547	10/11/1994	Rao et al.	423	650	
	5,376,167	12/27/1994	Broutin et al.	96	8	
	5,382,271	1/17/1995	Ng et al.	48	61	
	5,449,848	9/12/1995	Itoh	585	430	
	5,458,857	10/17/1995	Collins et al.	422	198	
	5,498,278	3/12/1996	Edlund	96	11	

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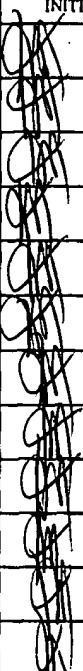
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	WO 97/43796	11/1997	WIPO				X
	WO 99/30806	6/1999	WIPO			X	

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	English language abstract of Japanese Patent No. 11116202, 1999.
	English language abstract of Great Britain Patent No. 2,305,186.
EXAMINER 	DATE CONSIDERED 1/18/2006

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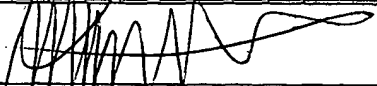
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	5,500,122	3/19/1996	Schwartz	210	321.75	
	5,516,344	5/14/1996	Corrigan	48	127.9	
	5,518,530	5/21/1996	Sakai et al.	96	11	
	5,520,807	5/28/1996	Myrna et al.	210	321.75	
	5,525,322	6/11/1996	Willms	423	653	
	5,536,405	7/16/1996	Myrna et al.	210	321.75	
	5,580,523	12/3/1996	Bard	422	50	
	5,589,599	12/31/1996	McMullen et al.	585	240	
	5,637,259	6/10/1997	Galuszka et al.	252	373	
	5,639,431	6/17/1997	Shirasaki et al.	422	212	
	5,645,626	7/8/1997	Edlund et al.	95	56	
	5,679,249	10/21/1997	Fendya et al.	210	321.63	

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DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO
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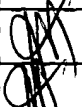
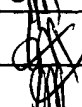
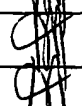
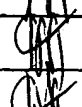
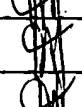

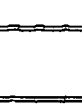
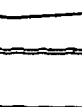

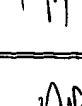

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	Chai, M., et al., "Promotion of Methane Steam Reforming Using Ruthenium-Dispersed Microporous Alumina Membrane Reactor," Chemistry Letters, The Chemical Society of Japan, pp. 41-44 (1993).
	"Compact, Lightweight Fuel Reformer for Fuel Cells," Argonne National Laboratory/U.S. Department of Energy (July, 1996).
EXAMINER	DATE CONSIDERED
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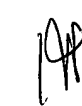
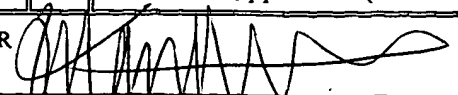
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	5,734,092	3/31/1998	Wang et al.	73	23.25	
	5,738,708	4/14/1998	Peachey et al.	95	56	
	5,741,605	4/21/1998	Gillett et al.	429	31	
	5,782,960	7/21/1998	Ogawa et al.	96	11	
	5,795,666	8/18/1998	Johnssen	429	17	
	5,811,065	9/22/1998	Sterenber	422	198	
	5,821,185	10/13/1998	White et al.	502	4	
	5,833,723	11/10/1998	Kuwabara et al.	48	61	
	5,858,314	1/12/1999	Hsu et al.	422	211	
	5,861,137	1/19/1999	Edlund	14	77.1	
	5,874,051	2/23/1999	Heil et al.	422	171	

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DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO

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	Edlund, Dr. David and William Pledger, "Development of a Compact and Economical Steam Reformer for Fuel-Cell Systems," Fifth Grove Fuel Cell Symposium, Commonwealth Institute, London, U.K., p. 6 (September 22-23, 1997).
	Edlund, David J. and William A. Pledger, "The Practical Use of Metal-Membrane Reactors for Industrial Applications," The 1995 Membrane Technology Reviews, pp. 89-97 (November, 1994).
EXAMINER	DATE CONSIDERED
	1/18/2006

SHEET 7 OF 8  
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 TC 1760

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**U.S. PATENT DOCUMENTS**

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<i>[initials]</i>	5,932,181	8/3/1999	Kim et al.	422	189	
<i>[initials]</i>	5,938,800	8/17/1999	Verrill et al.	48	127.9	
<i>[initials]</i>	5,997,594	12/7/1999	Edlund et al.	48	76	
<i>[initials]</i>	6,103,411	8/15/2000	Matsubayashi et al.	429	17	
<i>[initials]</i>	6,120,923	9/19/2000	Van Dine et al.	429	17	
<i>[initials]</i>	6,152,995	11/28/2000	Edlund	96	4	
<i>[initials]</i>	6,165,633	12/26/2000	Negishi	429	17	
<i>[initials]</i>	6,171,574	1/9/2001	Juda et al.	423	648.1	
<i>[initials]</i>	6,190,623	2/20/2001	Sanger et al.	422	199	
<i>[initials]</i>	6,221,117	4/24/2001	Edlund et al.	48	76	


**FOREIGN PATENT DOCUMENTS**

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES	NO

**OTHER DOCUMENTS**

<i>[initials]</i>		Minet, R. G., et al., "Experimental Studies of A Ceramic Membrane Reactor for the Steam/Methane Reaction at Moderate Temperatures (400-700°C)," Symposium on Natural Gas Upgrading II Presented before The Division of Petroleum Chemistry, Inc., Meeting of American Chemical Society, San Francisco, California, U.S.A., pp. 245-48 (April, 1992).
<i>[initials]</i>		Oertel, Michael, et al., "Steam Reforming of Natural Gas with Integrated Hydrogen Separation for Hydrogen Production," Chemical Engineering Technology, Vol. 10, pp. 248-55 (1987).

EXAMINER <i>[signature]</i>	DATE CONSIDERED <i>1/18/2006</i>
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FORM PTO-1449  INFORMATION DISCLOSURE CITATION IN AN APPLICATION  	DOCKET NUMBER	APPLICATION NUMBER
	NPW 312	09/802,361
	APPLICANTS DAVID J. EDLUND, WILLIAM A. PLEDGER and TODD STUDEBAKER	
	FILING DATE	GROUP ART UNIT
	March 8, 2001	1764




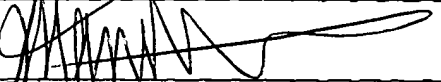
## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FIL. DATE IF APPROP.

## FOREIGN PATENT DOCUMENTS

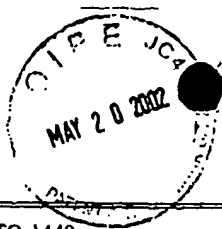
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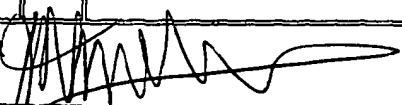
	Piwetz et al., "Hydrodesulfurization and Prereforming of Logistic Fuels for Use in Fuel Cell Applications," presented at the 1996 Fuel Cell Seminar held Nov. 17-20, 1996 in Orlando, Florida, pp. 780-783.
	Privette et al., "Status of SOFCo SOFC Technology Development," presented at the 1996 Fuel Cell Seminar held Nove. 17-20, 1996 in Orlando, Florida, pp. 206-209.
	Yang, Ralph T., "Gas Separation by Adsorption Processes," pp. 253-60, Butterworth Publishers, 1987.
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SHEET 1 OF 1

FORM PTO-1449		DOCKET NUMBER		APPLICATION NUMBER		
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		FILING DATE March 8, 2001		GROUP ART UNIT 1764		
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FIL. DATE IF APPROP.
	5,679,249	10/21/1997	Fendya et al.			
<div style="text-align: center;">COPY OF PAPERS ORIGINALLY FILED</div> <div style="text-align: right;">RECEIVED MAY 21 2002 TC 1700</div>						
FOREIGN PATENT DOCUMENTS						
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OTHER DOCUMENTS						
EXAMINER 			DATE CONSIDERED 1/18/2006			




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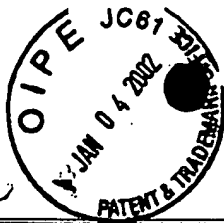
SHEET 1 OF 1

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FIL. DATE IF APPROP.
	5,741,474	4/21/1998	Isomura et al.	423	64801	
	5,271,916	12/21/1993	Vanderborgh et al.	423	246	
	4,869,894	9/26/1989	Wang et al.	423	650	
<div>RECEIVED APR 9 2002 TC 1700</div> <div>COPY OF PAPER ORIGINALLY FILED</div>						
FOREIGN PATENT DOCUMENTS						
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO
OTHER DOCUMENTS						
EXAMINER		DATE CONSIDERED 1/18/2006				



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		FILING DATE March 8, 2001		GROUP ART UNIT 1764		
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FIL. DATE IF APPROP.
<del>XXX</del>	3,251,652	5/17/1966	Pfefferle	429	656	
<del>XXX</del>	3,522,019	7/28/1970	Buswell et al.	422	190	
<del>XXX</del>	3,544,374	12/1/1970	D'Alessandro et al.	429	16	
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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO
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OTHER DOCUMENTS						
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EXAMINER 			DATE CONSIDERED 1/18/2006			



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FILING DATE March 8, 2001		GROUP ART UNIT 1764

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FIL. DATE IF APPROP.
<del>DA</del>	6,183,543	2/6/2001	Buxbaum	96	11	
<del>DA</del>	6,168,650	1/2/2001	Buxbaum	95	55	
<del>DA</del>	5,931,987	8/3/1999	Buxbaum	95	55	
<div>RECEIVED JAN 08 2002 TC 1700</div>						

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO

## OTHER DOCUMENTS

EXAMINER		DATE CONSIDERED	1/18/2006
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